

TABLE I—MINIMUM COOLING AND TEMPERATURE REQUIREMENTS FOR LIQUID EGG PRODUCTS  
[Unpasteurized product temperature within 2 hours from time of breaking]

Product	Liquid (other than salt product) to be held 8 hours or less	Liquid (other than salt product) to be held in excess of 8 hours	Liquid salt product	Temperature within 2 hours after pasteurization	Temperature within 3 hours after stabilization
Whites (not to be stabilized) .....	55 °F. or lower	45 °F. or lower	.....	45 °F. or lower	<sup>(1)</sup> If to be held 8 hours or less, 45 °F. or lower. If to be held in excess of 8 hours, 40 °F. or lower.
Whites (to be stabilized) .....	70 °F. or lower	55 °F. or lower	.....	55 °F. or lower	
All other product (except product with 10 percent or more salt added).	45 °F. or lower	40 °F. or lower	.....	If to be held 8 hours or less 45 °F. or lower. If to be held in excess of 8 hours, 40 °F. or lower.	
Liquid egg product with 10 percent or more salt added.	.....	.....	If to be held 30 hours or less, 65 °F. or lower. If to be held in excess of 30 hours, 45 °F. or lower.	65 °F. or lower <sup>2</sup> .	

<sup>1</sup> Stabilized liquid whites shall be dried as soon as possible after removal of glucose. The storage of stabilized liquid whites shall be limited to that necessary to provide a continuous operation.

<sup>2</sup> The cooling process shall be continued to assure that any salt product to be held in excess of 24 hours is cooled and maintained at 45 °F. or lower.

(d) Upon written request and under such conditions as may be prescribed by the National Supervisor, liquid cooling and holding temperatures not otherwise provided for in this section may be approved.

(e) Agitators shall be operated in such a manner as will minimize foaming.

(f) When ice is used as an emergency refrigerant by being placed directly into the egg meat, the source of the ice must be certified by the local or State board of health. Such liquid shall be dried. All ice shall be handled in a sanitary manner.

(g) Previously frozen egg or egg product cannot be added to liquid product for the purpose of complying with liquid cooling requirements.

[36 FR 9814, May 28, 1971. Redesignated at 42 FR 32514, June 27, 1977 and further redesignated at 46 FR 63203, Dec. 31, 1981, as amended at 47 FR 745, Jan. 7, 1982; 60 FR 49170, Sept. 21, 1995]

#### § 590.532 Liquid egg holding.

(a) Tanks and vats used for holding liquid eggs shall be of approved construction, fitted with covers, and located in rooms maintained in a sanitary condition. Notwithstanding the foregoing, tanks designed for installa-

tion partially outside of a room or building are acceptable, providing all openings into the tanks terminate in the processing room.

(b) Liquid egg holding tanks or vats shall be equipped with suitable thermometers and agitators.

(c) Inlets to holding tanks or vats shall be such as to prevent excessive foaming.

(d) Gaskets, if used, shall be of a sanitary type.

[36 FR 9814, May 28, 1971. Redesignated at 42 FR 32514, June 27, 1977, as amended at 45 FR 23641, Apr. 8, 1980. Redesignated at 46 FR 63203, Dec. 31, 1981]

#### § 590.534 Freezing facilities.

(a) Freezing rooms, either on or off the premises, shall be capable of freezing all liquid egg products in accordance with the freezing requirements as set forth in § 590.536. Use of off-premise freezing facilities is permitted only when prior approval in writing from the National Supervisor is on file.

(b) Adequate air circulation shall be provided in all freezing rooms.

#### § 590.536 Freezing operations.

(a) Freezing rooms shall be kept clean and free from objectionable odors.

(b) Requirements. (1) Nonpasteurized egg products which are to be frozen shall be solidly frozen or reduced to a temperature of 10 °F or lower within 60 hours from time of breaking.

(2) Pasteurized egg products which are to be frozen shall be solidly frozen or reduced to a temperature of 10 °F or lower within 60 hours from time of pasteurization.

(3) The temperature of the products not solidly frozen shall be taken at the center of the container to determine compliance with this section.

(c) Containers shall be stacked so as to permit circulation of air around the containers.

(d) The outside of liquid egg containers shall be clean and free from evidence of liquid egg.

(e) Frozen egg products shall be examined by organoleptic examination after freezing to determine their fitness for human food. Any such products which are found to be unfit for human food shall be denatured and any official identification mark which appears on any container thereof shall be removed or completely obliterated and the containers identified as required in §§ 590.840 and 590.860.

**§ 590.538 Defrosting facilities.**

(a) Approved metal defrosting tanks or vats constructed so as to permit ready and thorough cleaning shall be provided.

(b) Frozen egg crushers, when used, shall be of approved metal construction. The crushers shall permit ready and thorough cleaning and the bearings and housing shall be fabricated in such a manner as to prevent contamination of the egg products.

(c) Service tables shall be of approved metal construction without open seams and the surfaces shall be smooth to allow thorough cleaning.

**§ 590.539 Defrosting operations.**

(a) Frozen egg products which are to be defrosted shall be defrosted in a sanitary manner.

(b) Each container of frozen eggs shall be checked for condition and odor just prior to being emptied into the crusher or receiving tank. Frozen eggs which have objectionable odors and are unfit for human food (e.g., sour, musty,

fermented, or decomposed odors) shall be denatured.

(c) Frozen whites to be used in the production of dried albumen may be defrosted at room temperature. All other whites shall be defrosted in accordance with paragraph (d) of this section.

(d) Frozen whole eggs, whites and yolks, and yolks may be tempered or partially defrosted for not to exceed 48 hours at a room temperature no higher than 40 °F. or not to exceed 24 hours at a room temperature above 40 °F.: *Provided*, That no portion of the defrosted liquid shall exceed 50 °F. while in or out of the container.

(1) Frozen eggs packed in metal or plastic containers may be placed in running tap water (70 °F or lower) without submersion to speed defrosting.

(2) The defrosted liquid shall be held at 40 °F. or less, except for product to be pasteurized or stabilized by glucose removal as provided in § 590.530. Defrosted liquid shall not be held more than 16 hours prior to processing or drying.

(e) Sanitary methods shall be used in handling containers and removing egg product.

(f) Crushers and other equipment used in defrosting operations shall be dismantled at the end of each shift and shall be washed, rinsed, and sanitized.

(1) Where crushers are used intermittently, they shall be flushed after each use and again before being placed in use.

(2) Floors and work tables shall be kept clean.

[36 FR 9814, May 28, 1971. Redesignated at 42 FR 32514, June 27, 1977, as amended at 43 FR 60138, Dec. 26, 1978. Redesignated at 46 FR 63203, Dec. 31, 1981, as amended at 60 FR 49170, Sept. 21, 1995]

**§ 590.540 Spray process drying facilities.**

(a) Driers shall be of a continuous discharge type and so constructed and equipped to prevent an excess accumulation of powder in the drier, bags, and powder conveyors.

(b) Driers shall be of approved construction and materials, with welded seams, and the surfaces shall be smooth to allow for thorough cleaning.